

# 8

FULL-LENGTH

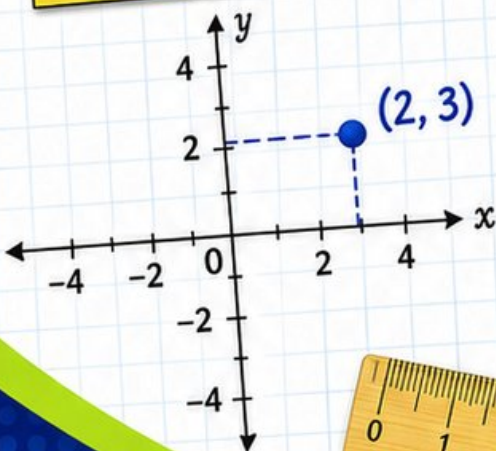
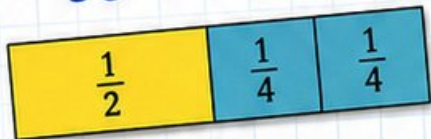
# Indiana ILEARN

## GRADE 5

# MATH PRACTICE TESTS

Mixed Practice Questions with Answer Key  
for Students, Parents, and Teachers

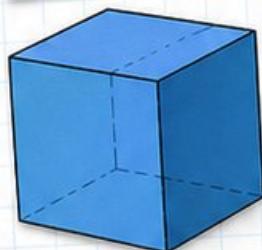
$$36 \div 4 = 9$$



$$2.4 \times 7 = 16.8$$

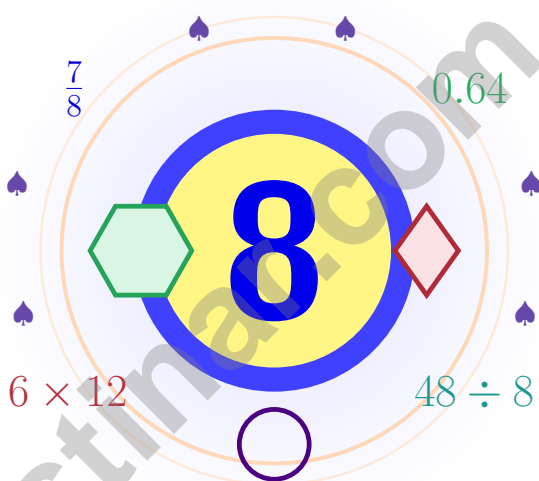
$$7 \times (12 - 5) = 49$$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



# 8 Indiana ILEARN Grade 5 Math Practice Tests

*Eight full tests woven into one calm, steady practice path*



Eight full tests, a focused quick review, and helpful support that turns Grade 5 practice in The Hoosier State into steady, confident growth from page one to the final check.

**Jay Daie and Reza Nazari**



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# Indiana Grade 5: Practice Path Briefing

A eight-step adventure for Indiana Grade 5 thinkers

## Just for Indiana Grade 5 Trail Specialists

This practice book is your steady companion for eight tests, not a place to be perfect. Math is like a long race lap: each careful step keeps you in the right lane and ready for the next turn.

Use these eight tests like stepping-stones. Take one test at a time, check your answers honestly, and notice which skills need more attention. Small improvements add up across seven rounds.

### Read

Read with care – math problems hide their gifts.

### Try

Try a strategy that fits the size of the numbers.

### Reflect

Reflect after each problem to lock the lesson in.

**A strong habit for Indiana mathematicians:** read carefully, estimate when it helps, show your steps, and keep going even when a question feels tricky. That is how steady math confidence is built.

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# Your Step-by-Step Plan

A simple routine that turns practice into progress

## Step 1: Notice

**Notice the structure: warm-up, test, review, repair.**

Spend a few minutes waking up your memory before the test begins.

## Step 2: Practice

**Practice one full test in quiet conditions.**

Work in a calm spot and focus on careful thinking before speed.

## Step 3: Honest Check

**Check honestly without rushing.**

Circle missed questions and notice which topics keep showing up.

## Step 4: Polish

**Polish the rough spots before the next test.**

Read the explanation, repair the work, and bring that lesson into the next test.



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## Grade 5 Mathematics Reference Materials

### PERIMETER AND AREA

Perimeter of Rectangle  $P = 2l + 2w$  or  $P = 2(l + w)$

Area of Rectangle  $A = l \times w$

Area of Triangle  $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism  $V = l \times w \times h$

### LENGTH

#### Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

#### Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

### CAPACITY

#### Customary

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups (c)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

#### Metric

1 liter (L) = 1,000 milliliters (mL)

### WEIGHT AND MASS

#### Customary

1 pound (lb) = 16 ounces (oz)

#### Metric

1 kilogram (kg) = 1,000 grams (g)

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### TIME

1 minute (min) = 60 seconds (sec)    1 week = 7 days

1 hour (hr) = 60 minutes (min)    1 year = 12 months

1 day = 24 hours (hr)    1 year = 52 weeks



1) Compare  $\frac{3}{2} \times 18$  to 18. Which is true?

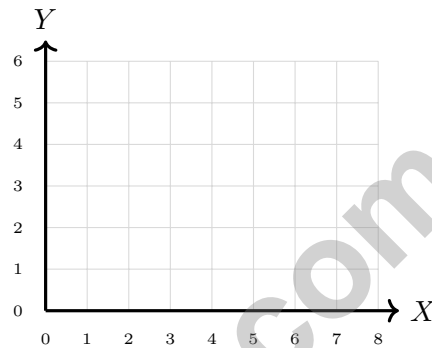
A.  $\frac{3}{2} \times 18 < 18$

C.  $\frac{3}{2} \times 18 > 18$

B.  $\frac{3}{2} \times 18 = 18$

D. Cannot be determined

2) Pattern X starts at 0 and adds 2. Pattern Y starts at 0 and adds 1. What ordered pair  $(X, Y)$  comes after 3 steps?



Record your answer in the space provided.

3) Which expression is worked out correctly?

Student	Steps for $6 + 2 \times 5$	Final
A	$6 + 2 = 8; 8 \times 5$	40
B	$2 \times 5 = 10; 6 + 10$	16
C	$6 \times 2 = 12; 12 + 5$	17
D	$6 + 5 = 11; 11 \times 2$	22

A. A

C. C

B. B

D. D



- 4) What is the x-coordinate of (5, 2)?

*Record your answer in the space provided.*

- 5) A recipe calls for  $\frac{2}{3}$  cup of butter. Mia makes  $\frac{3}{4}$  of the recipe. How much butter does she need? Give the answer in simplest form.

- A.  $\frac{6}{7}$  cup  
 B.  $\frac{1}{2}$  cup

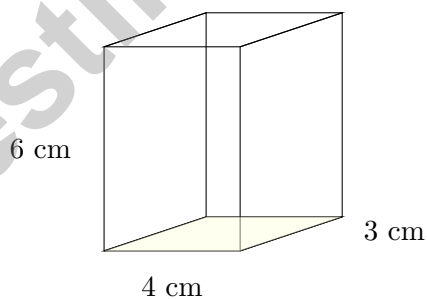
- C.  $\frac{5}{7}$  cup  
 D.  $\frac{9}{12}$  cup

- 6) Evaluate:  $100 - [5 \times (6 + 4)]$

- A. 30  
 B. 45

- C. 50  
 D. 90

Base =  $4 \times 3 = 12 \text{ cm}^2$



- 7)

Using  $V = B \times h$ , find the volume.

- A.  $36 \text{ cm}^3$   
 B.  $72 \text{ cm}^3$

- C.  $24 \text{ cm}^3$   
 D.  $18 \text{ cm}^3$



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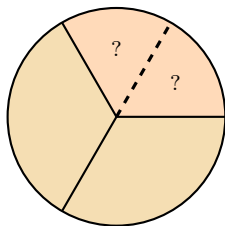
1 minute (min) = 60 seconds (sec)    1 week = 7 days

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- 1) A cookie is cut into 3 equal pieces. One piece is  $\frac{1}{3}$  of the cookie. That piece is shared equally by 2 children. What fraction of the whole cookie does each child get?



- A.  $\frac{1}{6}$  of the cookie  
 B.  $\frac{1}{2}$  of the cookie  
 C.  $\frac{2}{3}$  of the cookie  
 D.  $\frac{1}{5}$  of the cookie
- 2) Which decimal is between 0.35 and 0.45?
- A. 0.3  
 B. 0.4  
 C. 0.5  
 D. 0.2
- 3) Estimate:  $3\frac{11}{12} + 4\frac{1}{11}$ .

Sum:  $4 + 4 = 8$

$$3\frac{11}{12} \approx 4$$

+

$$4\frac{1}{11} \approx 4$$

- A. 7  
 B. 8  
 C. 9  
 D. 10
- 4) A composite art display is made from two non-overlapping rectangular prisms. Prism A is 7 inches long, 4 inches wide, and 4 inches tall. Prism B is 6 inches long, 4 inches wide, and 4 inches tall. What is the total volume?
- A. 112 cubic inches  
 B. 236 cubic inches  
 C. 96 cubic inches  
 D. 208 cubic inches



## Grade 5 Mathematics Reference Materials

### PERIMETER AND AREA

Perimeter of Rectangle  $P = 2l + 2w$  or  $P = 2(l + w)$

Area of Rectangle  $A = l \times w$

Area of Triangle  $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism  $V = l \times w \times h$

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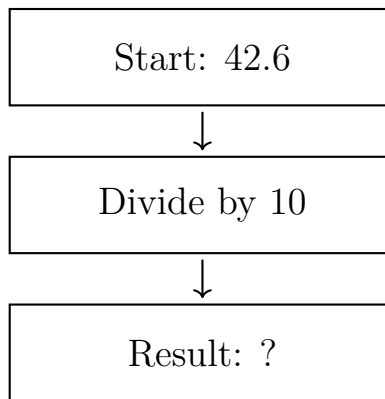
### TIME

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1 hour (hr) = 60 minutes (min)    1 year = 12 months

1 day = 24 hours (hr)    1 year = 52 weeks





1)

What is the result?

- A. 4.26                       C. 0.426
- B. 426                         D. 42.6

2) A box weighs 3 lb 8 oz. What is its weight in ounces?

*Record your answer in the space provided.*3) Add:  $\frac{3}{8} + \frac{1}{4}$ 

- A.  $\frac{5}{8}$                                C.  $\frac{4}{8}$
- B.  $\frac{4}{12}$                              D.  $\frac{1}{2}$

4) Pattern A is 1, 2, 3, 4, ... and Pattern B is 3, 6, 9, 12, ... If Pattern A gives the  $x$ -value and Pattern B gives the  $y$ -value, what ordered pair comes next?

- A. (4, 15)                         C. (6, 15)
- B. (5, 12)                         D. (5, 15)



## Grade 5 Mathematics Reference Materials

### PERIMETER AND AREA

Perimeter of Rectangle  $P = 2l + 2w$  or  $P = 2(l + w)$

Area of Rectangle  $A = l \times w$

Area of Triangle  $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism  $V = l \times w \times h$

### LENGTH

#### Customary

1 foot (ft) = 12 inches (in.)

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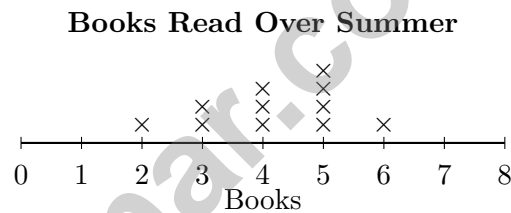
1 day = 24 hours (hr)    1 year = 52 weeks



- 1) A baker prepares portions. Each portion uses 45 grams of sugar. If 4 portions are prepared, what is the total sugar used in kilograms?

Use: 1 kilogram = 1,000 grams

- A. 0.18 kilograms                       C. 18 kilograms  
 B. 1.8 kilograms                         D. 180 kilograms
- 2) Round each fraction to the nearest benchmark 0,  $\frac{1}{2}$ , or 1 first. Which is a reasonable estimate for  $\frac{1}{3} + \frac{5}{12}$ ?
- A. 0     C. 1  
 B.  $\frac{1}{2}$      D. 2
- 3) The line plot shows the number of books read during summer break:



How many students read at least 4 books?

- A. 5     C. 7  
 B. 6     D. 8
- 4) Two students solve  $2.7 \times 100$ . Student X says 27. Student Y says 270. Who is correct?
- A. Student X                                       C. Both  
 B. Student Y                                       D. Neither



## Practice Test Answer Keys

### How to use this section:

1. check your answer
2. circle missed questions
3. rework them before reading the explanation

**Good correction habits build strong scores.**

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## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (5.CA.7)  $\frac{3}{2} > 1$ , so the product is greater than 18.
- 2) **The correct answer is (6, 3).** (5.CA.11) Start with (0, 0). Then match the next terms from each pattern: (2, 1), (4, 2), and (6, 3). Accept equivalent spacing or comma formatting.
- 3) **Choice B is correct.** (5.M.1) The correct work multiplies before adding. Student B finds  $2 \times 5 = 10$  first, then adds  $6 + 10 = 16$ .
- 4) **The correct answer is 5.** (5.CA.11) The first number in an ordered pair is the x-coordinate.
- 5) **Choice B is correct.** (5.CA.11) Taking  $\frac{3}{4}$  of the butter means multiply:  $\frac{3}{4} \times \frac{2}{3} = \frac{6}{12}$ , which simplifies to  $\frac{1}{2}$  cup.
- 6) **Choice C is correct.** (5.M.1) The brackets show what must be subtracted from 100. First  $(6 + 4) = 10$ , then  $5 \times 10 = 50$ , so  $100 - 50 = 50$ .
- 7) **Choice B is correct.** (5.M.1)  $V = B \times h = 12 \times 6 = 72 \text{ cm}^3$ .
- 8) **Choice D is correct.** (5.M.3) Divide the volume by the base area:  $450 \div 50 = 9$ , so the height is 9 cm.
- 9) **The correct answer is 24.** (5.CA.11) Multiply the Pattern A value by 6:  $6 \times 4 = 24$ .
- 10) **Choice A is correct.** (5.CA.11) One tenth of the rectangle is split into 2 equal smaller parts. That makes each small part  $\frac{1}{10} \div 2 = \frac{1}{20}$  of the whole.
- 11) **Choice B is correct.** (5.CA.10) Estimate:  $2.89 \approx 3$  and  $3.15 \approx 3$ , so  $3 + 3 = 6$ . Exact:  $2.89 + 3.15 = 6.04$  (hundredths:  $9 + 5 = 14$ , regroup; tenths:  $8 + 1 + 1 = 10$ , regroup; ones:  $2 + 3 + 1 = 6$ ).
- 12) **Choice A is correct.** (5.CA.11) A point in this region has a positive x-coordinate and a positive y-coordinate. Only (4, 6) has both coordinates greater than 0.
- 13) **Choice B is correct.** (5.M.1) Total grams:  $30 \times 10 = 300 \text{ g}$ . Convert:  $300 \div 1000 = 0.3 \text{ kg}$ .
- 14) **Choice B is correct.** (5.CA.11) "The sum of 12 and 8" means group  $12 + 8$ . "Half of" that sum means divide the grouped total by 2.
- 15) **Choice C is correct.** (5.M.4) Each layer has  $4 \times 3 = 12$  unit cubes. With 2 layers, the total is  $12 \times 2 = 24$  unit cubes.
- 16) **Choice C is correct.** (5.CA.1) After bringing down 6 to get 36, we need  $23 \times ?$  to be less than 36. Since  $23 \times 2 = 46 > 36$ , we use  $23 \times 1 = 23$  instead. The quotient is 41 with remainder 13.
- 17) **Choice D is correct.** (5.NS.3)  $6,800 \div 100 = 68$ . The divisor must be  $10^2 = 100$ .
- 18) **The correct answer is 15.** (5.NS.3) Each meter has 3 third-meter pieces. Five meters have  $5 \times 3 = 15$  pieces.
- 19) **Choice C is correct.** (5.CA.8) Row A has one copy of  $(20 + 5)$ . Row B has 3 copies of that same amount, so Row B has 3 times as many plants.
- 20) **Choice C is correct.** (5.CA.8) The unit fraction is the amount being shared, so divide  $\frac{1}{3}$  by 4. The equation is  $\frac{1}{3} \div 4 = n$ .
- 21) **Choices A, B are correct.** (5.CA.3) A is true because the whole parts make 3 and the fractions make  $\frac{5}{6}$ . B is true because 6 is a common denominator. C and D add denominators or miscompute.
- 22) **Choice C is correct.** (5.M.4) Volume of prism:  $16 \times 12 \times 9 = 1728$  cubic feet. Number of 4-cubic-foot units:  $1728 \div 4 = 432$  units.
- 23) **Choice B is correct.** (5.NS.3) A equals 0.89, B equals 0.089, C equals 8.9, and D equals 8.9. The smallest quotient is B.
- 24) **Choice C is correct.** (5.NS.3) Volume =  $16 \times 12 \times 8 = 192 \times 8 = 1536 \text{ in}^3$ .
- 25) **Choice B is correct.** (5.NS.3)  $52 \times 10 = 520$ . Multiply by 10 by appending one zero.
- 26) **Choice C is correct.** (5.CA.7)  $8 \times 1 = 8$ , while  $8 \times \frac{3}{2} = 12$ . Since  $\frac{3}{2} > 1$ , the second length is larger.
- 27) **Choice C is correct.** (5.M.4)  $5 \times 4 \times 3 = 60$  unit cubes. Volume is the product of length, width, and height.
- 28) **Choice B is correct.** (5.CA.10) Line up decimal points and subtract place by place.  $19.75 - 7.48 = 12.27$  yards. This confirms the answer.
- 29) **Choice A is correct.** (5.NS.1) In 0.68, the 6 is in the tenths place (0.1) and the 8 is in the hundredths place (0.01):  $6 \times 0.1 + 8 \times 0.01 = 0.68$ .



### Captain's Log—Voyage Complete

#### First Mate, Well Done!

◇ You sailed through 8 practice tests with steady hands and a sharp eye. The waters got rough sometimes, but you kept your course. That's what good sailors do. Now the harbor (test day) is in sight, and you are ready to dock with confidence. ◇

★ **Captain's wisdom:** a good sailor doesn't fight the wind—they read it and adjust. On a test, the same thing is true. When a problem feels tricky, don't panic. Read it again. Try a new strategy. Adjust the sails of your thinking. ★

#### Captain's Skills Inventory

- **Steady Steering:** EXCELLENT! You stay on course even when problems get tough.
- **Wind Reading:** STRONG! You can spot what a problem is really asking.
- **Crew Spirit:** HIGH! You believe in your own ability.
- **Harbor Approach:** READY! You know how to finish a test calmly.

**Final captain's note:** the best voyages combine planning with courage. You have both. Trust the chart you built through these 8 tests. Trust your hands on the wheel. Then sail confidently into test day.

If you'd like to share your experience or have questions, please email me at [reza@testinar.com](mailto:reza@testinar.com). I'd love to hear from you!

**Reza Nazari & Jay Daie**

Your Math Captain (Smooth Sailing Ahead)

$45 \div 5 = ?$

# PRACTICE TODAY.

$\frac{3}{5} + \frac{1}{10} = ?$



## ACHIEVE TOMORROW!



$3^2 + 4^2 = 25$

This book includes **8** full-length **Grade 5** math practice tests to help students master essential skills, build confidence, and achieve success. Each test is carefully designed to reflect real math standards and cover a variety of question types with detailed answer explanations.

$7x - 4 = 17$

$1\frac{1}{2} + 2\frac{1}{3} = ?$

## 8 FULL-LENGTH MATH PRACTICE TESTS



### REALISTIC PRACTICE

Tests mirror Grade 5 math standards and real assessment formats.



### ANSWER KEY INCLUDED

Detailed answer explanations help students understand and learn.



### BUILD CONFIDENCE & SKILLS

Strengthens problem-solving abilities and reinforces key math concepts.



### IMPROVE & TRACK PROGRESS

Identify strengths and focus on areas that need improvement.



### ACHIEVE SUCCESS

Boosts test readiness and helps students achieve their best results.

### COVERS ALL KEY GRADE 5 MATH TOPICS

- ✓ Whole Numbers & Operations
- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
- ✓ Graphing & Data Analysis

...and More!



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for more Grade 5 math resources and practice materials!



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Practice with purpose. Succeed with confidence!